Wood biomass energy will likely become an emerging market. The Forest Service realizes that developing and using renewable sources of energy are national goals and that woody biomass is a potential source of renewable energy and fuel. However, we do not envision the production of wood biomass energy to be a sole purpose and need of any commercial timber sale. Small diameter utilization of woody material for biomass energy can also be used to promote forest restoration, increase the growth of higher-value trees and forest products, reduce forest fire risk, and support the removal of invasive species. Small scale local firewood vendors can play a significant role in economically achieving thinning objectives, especially in younger stands, through small diameter utilization and providing wood biomass energy products.

As defined in Appendix F-Glossary, woody biomass can include limbs, tops, needles, leaves and other woody parts of trees and woody plants. Review of scientific literature suggests that substantial removal of tree branches and foliage that typically contribute to the nutrient pool can have negative effects on long-term soil productivity. Intensive removal of woody biomass may especially cause nutrient depletion on sensitive sites such as those with shallow, coarse textured soils. On sites with existing large quantities of woody biomass on the ground, less retention is necessary. Therefore, woody biomass utilization on the Forest will include, in addition to the merchantable main stem logs, logging slash, small diameter trees, tops and limbs or trees not considered merchantable in traditional markets. It will not include below ground biomass, downed logs, stumps or shrubs. Increasing demand for wood biomass energy could result in increased harvest levels using unlimited small diameter utilization, especially on formerly low productivity or less commercially valuable sites. The graph below indicates where harvest intensity is low and harvests are infrequent less woody biomass needs to remain onsite. Using the graph, at least 30 percent of the logging slash will be retained on all sites. On poorer sites, like site index 50, about 60 percent of the logging slash will be retained.